

Correspondence

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TO THE EDITOR, *Genitourinary Medicine*

Penicillinase producing *Neisseria gonorrhoeae* in a hospital in Barcelona, Spain

Sir,

In 1976 the first strains of *Neisseria gonorrhoeae* containing plasmids that encode for TEM-1 type enzymes (β lactamases) similar to those found in *Escherichia coli* and *Haemophilus influenzae* were isolated in west Africa and South East Asia.¹ In a few years these penicillinase producing strains of *N gonorrhoeae* (PPNG) spread from their original locations to Europe and America. They are fully resistant in vivo to benzylpenicillin, ampicillin, and some cephalosporins.

Infections caused by PPNG strains usually appear in poor social environments. Our municipal hospital serves the population around Barcelona's sea port, where prostitution is widespread. It is a charity hospital with 450 beds, and has a drug addiction treatment service.

A retrospective review of *N gonorrhoeae* isolates, with particular attention to β lactamase production, shows a large increase in PPNG strains in our hospital during the past two years. In 1984 the first two PPNG strains, which accounted for 5% of all isolates, were found. In 1985 the prevalence of PPNG was already 20% of all isolates. Culture of the organism and strain identification were performed using standard methods; β lactamase production was detected by the chromogenic cephalosporin (Nitrocephin, Oxoid) and acidimetry (Betatest, Rosco) methods.

TABLE 1 Isolation of gonococci in 1985 according to production of β lactamase and sex of patients

	No of gonococcal isolates:		
	PPNG	Non-PPNG	Total
Men	1	14	15
Women	7	17	24
Neonate		1	1
Total	8	32	40

PPNG = penicillinase producing *Neisseria gonorrhoeae*.

Table I shows gonococcus isolation in 1985 according to sex and β lactamase production. Our risk group was made up of young women aged 16 to 38 (mean 25) years, parenteral drug abusers, and prostitutes

TABLE II Clinical presentation of gonococcal infection in 24 women

	PPNG	Non-PPNG
Pelvic inflammatory disease (PID)	4	11
Normal childbirth	1	1
Inguinal adenitis with secondary syphilis	1	0
PID and perihepatitis	1	0
Vaginitis	0	5

PPNG = penicillinase producing *Neisseria gonorrhoeae*.

(85%). Table II shows clinical presentations in the 24 women patients. Of seven with PPNG infection, four had positive results in serological tests for syphilis (rapid plasma reagin (RPR), fluorescent treponemal antibody (FTA), or both) and one had four concurrent sexually transmitted diseases: syphilis, gonorrhoea, anogenital warts, and pubic pediculosis. All the men had acute urethritis. A neonate born to a drug addict mother had ophthalmia neonatorum caused by *N gonorrhoeae* susceptible to penicillin.

As clinical and microbiological follow up is very difficult in these patients, it has been necessary to change treatment regimens for this risk group.

Yours faithfully,
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References

1. World Health Organisation. *Neisseria gonorrhoeae* producing penicillinase. *Weekly Epidemiological Record* 1976;53: 293-4.
2. Ashford WA, Golash RC, Hemming UG. Penicillinase producing *Neisseria gonorrhoeae*. *Lancet* 1976;ii:657-8.

3. Matthew M. Plasmid-mediated beta lactamases of Gram negative bacteria: properties and distribution. *J Antimicrob Chemother* 1979;5:349-58.

TO THE EDITOR, *Genitourinary Medicine*

Infection with penicillinase producing *Neisseria gonorrhoeae* in Catalonia

Sir,

Since their simultaneous description in 1976 by Phillips¹ and Ashford *et al.*,² penicillinase producing strains of *Neisseria gonorrhoeae* (PPNG) have been reported worldwide. Epidemiological studies have shown that there are two endemic areas of infection: the far east (Thailand, the Philippines, Korea, and Hong King) and west Africa (Nigeria and Ghana); strains from such areas have, in addition, characteristic plasmid patterns. In Spain the first patient infected with a PPNG strain, a young man who had acquired the disease in Thailand, was observed in 1979.³ Infections that had been acquired in Spain were later reported but, with the exception of some self limited outbreaks, the percentage of PPNG strains rarely exceeds 5% in our country.⁴ Until 1984 PPNG strains accounted for 5-4% of gonococcal isolates found in our hospital, but from then on the incidence of infections with such strains has increased dramatically.

From January 1985 to May 1986 we isolated *N gonorrhoeae* from 89 patients (96 cases, 94 strains). Each patient was

TABLE 1 Characteristics of 89 patients with gonorrhoea

	Total patients with gonorrhoea	Patients with PPNG strains
No of patients	89	25
No of strains	94	26
Age range (mean) (years)	5-63 (27.6)	18-63 (28.5)
Race:		
Black	65	21
White	23	4
Arabic	1	0
Sex (ratio of men: women)	78:11	24:1

PPNG = penicillinase producing strains of *Neisseria gonorrhoeae*.